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OCCUPATIONAL GUIDANCE FOR OFF-FARM AGRICULTURE.

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THIS PUBLICATION WAS DESIGNED TO HELP STATE AND LOCAL VOCATIONAL EDUCATION LEADERS DEVELOP PROGRAMS TO PREPARE YOUTHS AND ADULTS FOR EMPLOYMENT ENTRY OR ADVANCEMENT IN THE OFF-FARM AGRICULTURAL OCCUPATIONS. EIGHT INSTRUCTIONAL AREAS ARE IDENTIFIED AND DEFINED, AND EXAMPLES OF JOB TITLES ARE GIVEN FOR EACH--AGRICULTURAL PRODUCTION, AGRICULTURAL MECHANICS, AGRICULTURAL SUPPLIES, AGRICULTURAL PRODUCTS, AGRICULTURAL RESOURCES, FORESTRY, ORNAMENTAL HORTICULTURE, AND OTHER AGRICULTURE. TO HELP PRACTITIONERS USE THE "DICTIONARY OF OCCUPATION TITLES" AND "STANDARD INDUSTRIAL CLASSIFICATION MANUAL," SELECTED JOB TITLES AND INSTRUCTIONAL AREAS ARE LISTED WITH THEIR COUNTERPART FROM THESE REFERENCES. A SELECTED BIBLIOGRAPHY ON OCCUPATIONAL GUIDANCE IN AGRICULTURE CONTAINS ITEMS PUBLISHED BETWEEN 1962 AND 1965. STANDARDIZED TESTS WHICH BEST APPLY TO THESE OCCUPATIONS ARE LISTED. THE APPENDIX LISTS JOB TITLES IN THE AREA OF AGRICULTURAL PRODUCTION AND GIVES A SAMPLE COUNSELOR-STUDENT DIALOG USING THE RESOURCES DISCUSSED IN THIS REPORT. THIS DOCUMENT IS ALSO AVAILABLE FROM THE CENTER FOR RESEARCH AND LEADERSHIP DEVELOPMENT IN VOCATIONAL AND TECHNICAL EDUCATION, THE OHIO STATE UNIVERSITY, 980 KINNEAR ROAD, COLUMBUS, OHIO 43212. (EM)

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OCCUPATIONAL GUIDANCE FOR OFF-FARM AGRICULTURE

The Center for Research and Leadership Development

in Vocational and Technical Education

The Ohio State University
980 Kinnear Road
Columbus, Ohio 43212

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OCCUPATIONAL GUIDANCE FOR OFF-FARM AGRICULTURE

The Center for Research and Leadership Development
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Publications on Off-Farm Agricultural Occupations
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This publication is one of a series relating to Off-Farm Agricultural Occupations developed at The Center for Vocational and Technical Education under a grant from the Division of Adult and Vocational Research, U. S. Office of Education. Each of these publications was designed for a specific purpose. However, they are designed to complement and reinforce each other. It is suggested that persons using any of these materials will want to familiarize themselves with the other publications in this series. Following is a complete listing of this series:

1. Policy and Administrative Decisions in Introducing Vocational and Technical Education in Agriculture for Off-Farm Occupations

2. Vocational and Technical Education in Agriculture for Off-Farm Occupations

3. Summary of Research Findings in Off-Farm Agricultural Occupations

4. Planning and Conducting Cooperative Occupational Experience for Off-Farm Agriculture

5. Occupational Guidance for Off-Farm Agriculture

6. Horticulture - Service Occupations
(Course outline and twelve modules)

7. Agricultural Supply - Sales and Service Occupations
(Course outline and twelve modules)

8. Agricultural Machinery - Service Occupations
(Course outline and sixteen modules)

9. Agricultural Chemicals Technology
(Course outline and nine modules)

PREFACE

Nearly every handbook concerning agricultural occupations suggests that the student seek further information from the guidance counselor and the vocational agriculture instructor. Yet there has been a dearth of information written to specifically assist educational leaders in performing this guidance function.

This publication is one of a series developed by a national task force at The Center for Vocational and Technical Education to assist state and local vocational education leaders in developing programs to prepare youth and adults for employment and/or advancement in off-farm agricultural occupations.

The project had its origin in the National Research Coordination Conferences on Off-Farm Agricultural Occupations sponsored by The National Center for Advanced Study and Research in Agricultural Education and the Agricultural Education Branch of the U. S. Office of Education in May of 1963 and January of 1964. These conferences were designed to assist states in undertaking studies of off-farm agricultural occupations.

Hundreds of occupations requiring a knowledge of agriculture were identified as a direct result of the national project. A special committee was assembled at The Center to categorize the job titles into logical instructional areas. This committee consisted of the following individuals: Linwood K. Bailey, Staff Assistant - Manpower, PPA Division, ASCS, U.S. Department of Agriculture,

Washington, D. C.; R. A. Baker, Auburn University, Alabama; Herbert D. Brum, Assistant Supervisor of Vocational Agriculture, Columbus, Ohio; William E. Drake, Cornell University, Ithaca, New York; James W. Hensel, Center Staff; Norman K. Hoover, Pennsylvania State University; Glenn Z. Stevens, Pennsylvania State University; Bill W. Stevenson, Oklahoma State University; Emanuel Weinstein, Occupational Analyst, Ancillary Service Section, Division of Vocational and Technical Education, Washington, D. C.

Subsequent association of several of the committee members with other national committees and in consultation with Neville Hunsicker, Chief, Agricultural Education, U. S. Office of Education, Washington, D. C., resulted in the major instructional area categories listed in this publication.

Special group work under the direction of Dr. Glenn Z. Stevens was completed at Pennsylvania State University to match major agricultural occupations identified in the state studies with the definitions in the Dictionary of Occupational Titles and with the structure of the Standard Industrial Classification.

Dr. Glenn Z. Stevens, Professor, Pennsylvania State University, provided the leadership and assumed the major role for the development of this publication. Credit is due Mr. Linwood K. Bailey, United States Department of Agriculture, who assisted in the editorial review and played an active role in the committee work concerning the total project. Further review suggestions were offered by Emanuel Weinstein, Occupational Analyst, Division of

Vocational and Technical Education, Washington, D. C. Dr. Earl Webb, Texas A & M, assisted in the final review of the publication.

It is hoped that "Occupational Guidance for Off-Farm Agriculture" will provide a basis for clustering certain agricultural occupations within instructional area categories. It is not the purpose of this material to assign specific numbers to agricultural occupations. We feel that this would most certainly lead teachers into a dead-end road. Yet there is a need for an identification of certain clusters in relation to the accepted classification systems.

It should be recognized that this material is developmental in nature and only the first step toward identifying the role of vocational agriculture in the off-farm agricultural occupations. Although considerable time and effort have been expended to bring the work to this stage of development, this material is not the final answer in guidance for off-farm agricultural occupations.

We hope that the reader will share his suggestions with the Center concerning the material in this publication.

James W. Hensel
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and Technical Education

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I

INTRODUCTION

The concept that agriculture is more than farming is recognized within the framework of the Vocational Education Act of 1963. Vocational and technical educators and others are striving to implement a revision of vocational education in agriculture so as to aid persons whose interests are in off-farm occupations that require knowledge and skills in agricultural subjects. The occupations have been termed "off-farm occupations requiring agricultural competencies."

To identify educational objectives a commonality of terms is necessary as a beginning. What occupations are involved? What definition or job content is given to an occupational title in one area of the country? Does it mean the same in other areas? What does an occupational title mean to a school administrator and to a school? What occupations require agricultural competencies, and how much? What are the occupational opportunities? What are the relationships of occupational titles requiring various degrees of agricultural competencies to occupational titles used in other classifications and for other purposes?

To come to grips with these questions, vocational educators have taken small first steps. The cooperative research project which was initiated by state leaders in vocational agriculture in 1964 is considered as one of the significant steps.

The research data from this project have been used for a number of purposes. One is in the drafting of this publication which is prepared to give instructors and counselors a guide to the off-farm occupations in which employers state present or increasingly prospective employment opportunities and in which some degree of knowledge and skill in agricultural subjects is desired.

The occupations herein are stated in terms of titles only. They have not been defined nor is there a specified degree of agricultural competence needed. The occupational titles in this publication merely show the direction in which educators and counselors should encourage curriculum development for those to be trained and occupational objectives for those interested in employment opportunities.

A task force involving persons from a representative number of states, the U. S. Office of Education, the U. S. Department of Labor and from the U. S. Department of Agriculture, met at The Center for Vocational and Technical Education at The Ohio State University and later in Washington, D. C. to attempt to categorize instructional areas of vocational education in agriculture and the occupations in off-farm businesses requiring agricultural competencies.

It has been the consensus of the group that a publication such as this is needed which will give teachers of agriculture and guidance personnel a ready reference for general guidelines concerning off-farm occupations. The authors recognize that this is only the first small step toward a complete classification system which will lend the

off-farm agricultural occupations real visibility. Further work is underway which will carry this first step into a more detailed publication, which will introduce specific occupational descriptions and definitions as well as information on employment opportunities, job requirements, educational requirements including training, and indicated salary ranges.

The preparation of guidelines with respect to off-farm occupations in no way excludes agricultural production as a learning area. Indeed, employers contacted in the research project expect students to acquire much of their knowledge and skill in agriculture through course subject instruction under "Agricultural Production." The production phase is the keystone upon which all other agricultural occupations must build. This fact is recognized, but some of the specific work concerning the production phase of agriculture has been omitted from this publication since the primary focus was given to the off-farm occupations.

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II

OCCUPATIONAL OBJECTIVES AND INSTRUCTIONAL AREAS IN AGRICULTURE

Occupations in which knowledge and skills in agriculture are required may be classified into major instructional areas. They are (1) agricultural production, (2) agricultural mechanics, (3) agricultural supplies, (4) agricultural products, (5) agricultural resources, (6) forestry, (7) ornamental horticulture, and (8) other agriculture. Groups of related courses or units of subject matter in each instructional area are organized for teaching that will help students to develop knowledge, skills, insights, and attitudes involved in preparing to enter and advance in agricultural occupations. Learning activities include classroom instruction, laboratory practice, and experience on farms or in agriculturally related business establishments. The FFA and associated leadership training activities contribute to individual student development. An agricultural occupation may require education in one or more of the following instructional areas:

Instructional Area	Examples of job titles
Agricultural Production - an organization of subject matter and learning activities concerned with principles and practices in the production of livestock, field crops, fruits and vegetables, fiber and other crops, on commercial and part-time farms. In addition to plant science, animal science, farm mechanics, and farm business management, instruction specific to each production enterprise is emphasized. Knowledge and skills taught involve the economic use of agricultural land, labor, capital and management. The safe and efficient operation of modern farm equipment and the proper harvesting and handling of high quality products are important for beginning workers.	Livestock Farmer Dairy Farmer Crop Farmer General Farmer Part-time Farmer Farm Manager Farm Equipment Operator

Instructional Area	Examples of job titles
Agricultural Mechanics - an organization of subject matter and learning activities concerned with marketing and service of agricultural power and machinery and related equipment. Opportunities are provided for students to study and gain experience in assembly, adjustment, maintenance, and repair of agricultural machinery and of structures and conveniences. Students learn tool processes and how to perform services.	Ag. Mach. Manager Ag. Mach. Service Manager Ag. Mach. Salesman Ag. Mach. Partsman Ag. Mach. Set-up Man Ag. Mach. Mechanic
Agricultural Supplies - an organization of subject matter and learning activities concerned with principles and practices involved in the processing, marketing, and servicing of agricultural supplies such as agricultural chemicals, livestock feeds, seed, fertilizer, and other supplies including small equipment. Many businesses are organized principally to provide services to agricultural production.	Ag. Supplies Manager Ag. Supplies Salesman Ag. Supplies Installation and Service Man Ag. Supplies Applicator Ag. Supplies Equipment Operator
Agricultural Products - an organization of subject matter and learning activities concerned with principles and operations involved in the preparation of agricultural products for sale. Subject matter and experiences are organized under the descriptive titles of meat, poultry, and eggs; dairy products; fruits and vegetables; cereal grains; and non-food products (wool, cotton, tobacco). Learning activities are provided in assembling, sorting, testing, grading, processing, storing, and marketing of each agricultural product.	Meat Processing Manager Dairy Products Tester Meat and Poultry Products Salesman Poultry Processor Fruit and Vegetable Inspector Grain Elevator Operator Agriculture Commodity Grader

Instructional Area	Examples of job titles
Agricultural Resources - an organization of subject matter and learning activities designed to provide opportunities for students to study principles and processes dealing with the conservation and improvement of resources such as forested and other natural areas, fish and wildlife, soil, water and air, and with the establishment, management, and operation of recreational facilities.	Recreation Farm Manager Soil Conservation Aid Wildlife Conservation Officer Fish Hatchery Worker Park Worker
Forestry - an organization of subject matter and learning activities concerned with the management of trees grown as a crop. Other aspects of forestry are protection, logging, wood utilization, recreation and special products.	Forester Forest Ranger Forestry Aid Log Grader Saw Mill Operator Christmas Tree Grower
Ornamental Horticulture - an organization of subject matter and learning activities concerned with production, sales and services in greenhouses, nurseries, and garden centers, and with the establishment and maintenance of turf and landscape areas.	Nursery or Greenhouse Manager Florist Garden Center Salesman Landscape Aid Nursery or Greenhouse Grower Greenskeeper Tree Surgeon
Other Agriculture - an organization of subject matter and learning activities concerned with specialized business services, education, inspection, regulation and other government services ordinarily not included in the first seven categories.	Vocational Agriculture Instructor County Agricultural Extension Agent Farm Loan Officer

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III

INSTRUCTION AREAS IN AGRICULTURE

The following outline was prepared by a committee working with the U. S. Office of Education. It is a list of areas of subject matter content (courses) in agriculture taught in the several types of school organizations: elementary, secondary, junior and community colleges, vocational-technical and adult programs. Regional and local consideration will influence the course content and the level at which it is taught.

In developing the outline, the FFA and related leadership training and supervised occupational experience programs were considered to be important instructional media and highly significant integral activities that aid agricultural education in making contributions to the guidance and total general education development of students.

AGRICULTURE

I. Agricultural Production

A. Animal Science

1. Dairy cattle, livestock, and poultry
   a. Dairy cattle
   b. Beef cattle
   c. Swine
   d. Sheep
   e. Poultry
   f. Other
2. Nutrition
3. Genetics
4. Physiology
5. Animal Health
6. Production management
7. Marketing
8. Other

B. Plant Science

1. Crops
   a. Field and forage crops
   b. Tree fruit and nut crops
   c. Small fruit crops
   d. Vegetable crops
   e. Farm forestry
   f. Other
2. Soils
3. Nutrition
4. Genetics
5. Physiology
6. Pest control
7. Other

C. Agricultural Mechanics (farm)

1. Farm power and machinery
2. Farm structures and conveniences
3. Soil and water management
4. Farm electrification
5. Farm construction and maintenance
6. Other

D. Farm Business Management

1. Farm accounts
2. Performance records
3. Budgeting and analysis
4. Purchasing and marketing
5. Financial and legal management
6. Farm organizations
7. Governmental programs
8. Other

II. Agricultural Mechanics (off-farm)
(Sales and Service)

A. Agricultural power and machinery

B. Agricultural structures and conveniences

C. Soil and water management

D. Agricultural electrification

E. Agricultural construction and maintenance

F. Other

III. Agricultural Supplies
(Processing, marketing, and services)

A. Agricultural chemicals

B. Livestock feeds

C. Seeds

D. Fertilizer

E. Other

IV. Agricultural Products
(Processing, marketing, and services)

A. Food products

1. Meet, fish, poultry, eggs
2. Dairy products
3. Fruits and vegetables
4. Cereal grains
5. Other food and beverages

B. Non-food agricultural products

1. Cotton
2. Tobacco
3. Wool
4. Other

V. Agricultural Resources
(Conservation, recreational utilization, and services)

A. Forested and other natural areas

B. Wildlife - including game farms and hunting areas

C. Fish - including fish farms and hatcheries

D. Soil

E. Water

F. Air

G. Other

VI. Forestry
(Production, processing, marketing, and services)

A. Forest management

B. Forest protection

C. Logging

D. Wood utilization

E. Recreation

F. Special products

G. Other

VII. Ornamental Horticulture
(Production, processing, marketing, and services)

A. Arboriculture

B. Floriculture

C. Greenhouse management

D. Nursery management

E. Landscaping

F. Turf management

G. Other

VIII. Other Agriculture

A. Business services

B. Education

C. Inspection and regulation

D. Other

IV

CLASSIFICATION SYSTEMS

As vocational agriculture teachers find a growing emphasis in their curriculum upon preparing young persons for off-farm agricultural occupations, they become increasingly aware of classification problems. Information often is requested in terms of an established and coded classification system and a standard terminology often is sought as teachers of agriculture discuss occupational information with school counselors.

This publication has attempted to familiarize the reader with the two most widely used classification systems: The Dictionary of Occupational Titles and the Standard Industrial Classification. If the reader wants details concerning the taxonomy and code of either system, he should study the introductory material in the appropriate publication.

The Dictionary of Occupational Titles

A major resource concerning occupational information for teachers of vocational agriculture is the "Dictionary of Occupational Titles," Third Edition, Bureau of Employment Security, U. S. Department of Labor, United States Government Printing Office, Washington, D. C., 1965.

The Dictionary serves vocational and educational guidance personnel as a basic source of occupational information in terms of both duties performed and relationships among jobs. Guidance personnel consider the Dictionary as one of the basic tools used

to help the individual evaluate his qualifications and potential in the selection of appropriate educational or vocational goals. The Dictionary of Occupational Titles is a two-volume source of occupational information in the broad area of manpower and related fields, provides a current inventory of jobs in the American economy, and gives an extensive analysis and description of what each involves and what personal traits are needed by workers. The Dictionary may be found in libraries and in the offices of many guidance counselors. Vocational agriculture teachers should become familiar with this reference.

Volume I of the Dictionary of Occupational Titles contains the names and definitions of nearly 22,000 separate occupations in the economy. The jobs are arranged in alphabetical order and followed by definitions which include information on what gets done, how it gets done, and why it gets done.

The complete job definitions, with information on the what, how, and why of the job, as well as indications of the knowledge and abilities required, are designed to give a concise and concrete occupational picture which also will convey some indication of the level of complexity involved.

Volume II complements Volume I by serving as a method of grouping jobs having the same basic occupational, industrial, or worker characteristics to help the user discern relationships among occupations. It is also a standard approach to classifying abilities, vocational experiences, and potentials of workers.

The occupations in the Dictionary have been incorporated into a classification structure in which the individual occupations are identified by six-digit code numbers. Throughout the occupational group arrangement, the jobs are grouped according to a combination of work field, purpose, material, product, subject matter, service, generic term, and/or industry, as reflected in the first three digits of the code.

The last three digits of the code number identify specific worker functions associated with each job. The digits refer to worker functions as they relate to Data, People, and Things, with the lower numbers generally signifying the higher degrees of complexity. Together, the last three digits of each code number express the total level of complexity at which the job requires the worker to function.

The task force working with problems of off-farm agricultural occupations requiring agricultural competencies suggested that the titles of the occupations found in the State research projects be compared to the extent feasible with titles in the Dictionary of Occupational Titles (D.O.T.). The listing that follows reflects this comparison under each of the seven major instructional areas. In examining and using the comparative titles it should be emphasized that the listings are titles only. The occupational titles found in the State studies are in the closest proximity to similar titles in the D.O.T. Occupational titles in the area of Agricultural Production have been included in appendix A as this publication is primarily devoted to the off-farm agricultural occupations.

A logical step beyond this publication would be to develop definitions of the occupations stemming from the State studies. These may or may not conform to the current D.O.T. definitions. The objective of the definition development project would be to determine which do conform. For those that do not, the Department of Labor could be advised and a request made for inclusion in the next D.O.T. revision.

To make the most effective use of the following pages of occupational titles, it is suggest that the reader:

(1) Determine the appropriate major area heading, i.e. Agricultural Supplies, Agricultural Mechanics, Ornamental Horticulture, etc.

(2) Locate the job title in question by checking the left hand column entitled: "Occupational Titles Found in Many of the State Studies." The partial listing of titles in this column should be familiar to most teachers of vocational agriculture.

(3) Move directly across the page to the right hand column entitled: "Dictionary of Occupational Titles, Third Edition, 1965." This column listing identifies the corresponding title which can be found in the Dictionary.

(4) Using Volumn I of the Dictionary of Occupational Titles, Third Edition, 1965, locate the complete definition of the job. The titles in Volumn I are listed in alphabetical order.

(5) Use the code number of the job and Volume II of the Dictionary of Occupational Titles if you wish to determine the grouping of jobs having the same basic occupational, industrial, or worker characteristics.

Occupational Titles in the Area of AGRICULTURAL SUPPLIES

Occupational Titles Found in Many of the State Studies	Dictionary of Occupational Titles Third Edition, 1965
Ag. Supplies Manager	Manager, Store (ret. tr.) 185.186
Ag. Supplies Production Manager	Manager, Production (any ind.) 185.168
Ag. Supplies Sales Manager	Manager, Sales (any ind.) 185.168
Ag. Supplies Service Manager	Manager, Service (ret. tr.; whole. tr.) 187.168
Ag. Supplies Office Manager	Manager, Office (ret. tr.) 185.168
Ag. Supplies Research and Development Director	Manager, Product Development (any ind.) 189.118
	Chemist, Agricultural (profess. & kin.) 022.081
Ag. Supplies Fieldman	Fieldman (any ind.) 180.118
Ag. Supplies Bookkeeper	Bookkeeper (clerical) I 210.388
Ag. Supplies Product Salesman	Salesman, Farm and Garden Supplies (whole. tr.) 277.358
Ag. Supplies Service Mechanic	Maintenance Mechanic (any ind.) II 638.281
Ag. Supplies Applicator	Sprayer (agric.) 424.883
Ag. Supplies Equipment Operator (Feed)	Feed Mixer (grain & feed mill.) 520.885
Ag. Supplies Warehouseman	Laborer, Stores (any ind.) 922.887

Occupational Titles in the Area of AGRICULTURAL MECHANICS

Occupational Titles Found in Many of the State Studies	Dictionary of Occupational Titles Third Edition, 1965
Ag. Machinery Manager	Manager, Store (ret. tr.) 185.168
Ag. Machinery Service Manager	Manager, Service Department (whole. tr.) 187.168
Ag. Machinery Parts Manager	Manager, Parts (ret. tr.; whole. tr.) 185.168
Ag. Machinery Sales Manager	Manager, Sales (ret. tr.; whole. tr.) 185.168
Ag. Machinery Office Manager	Manager, Office (any ind.) 169.168
Agricultural Engineer	Agricultural Engineer (profess. & kin.) 013.081
Ag. Machinery Fieldman	Fieldman (any ind.) 180.118
Ag. Machinery Bookkeeper	Bookkeeper (clerical) I 210.388
Ag. Machinery Salesman	Salesman, Tractor and Farm Implements (ret. tr.; whole. tr.) 277.358
Ag. Machinery Mechanic	Farm-Equipment Mechanic (agric.) I 624.281
Ag. Machinery Mechanic's Helper	Farm-Equipment Mechanic (agric.) II 624.381
Ag. Machinery Field Mechanic	Farm-Equipment Mechanic (agric.) II 624.381
Ag. Machinery Welder	Welder, Repair (welding) 812.884
Ag. Machinery Parts Man	Salesperson, Parts (ret. tr.; whole. tr.) 285.358
Ag. Machinery Set-up Man	Farm-Machinery Set-up Man (whole. tr.) 624.381
Ag. Machinery Warehouseman	Laborer, Stores (any ind.) 922.887

Occupational Titles in the Area of AGRICULTURAL PRODUCTS

Occupational Titles Found in Many of the State Studies	Dictionary of Occupational Titles Third Edition, 1965
Meat, Poultry, Eggs	
Meat Processing Plant Manager	Production Superintendent (any ind.) 183.118
Poultry Products Processing Plant Manager	Production Superintendent (any ind.) 183.118
Meat and Poultry Products Sales Manager	Manager, Sales (any ind.) 163.118
Meat and Poultry Products Department Manager	General Foremen (any ind.) 183.168
Veterinarian, Meat Quality	Veterinarian, Meat Inspector (gov. ser.) 168.284
Meat Grader	Grader, Meat (slaugh. & meat pack.) 525.387
Poultry Grader	Grader, Dressed Poultry (slaugh. & meat pack.) 529.687
Meat Processor	Butcher, All around (slaugh. & meat pack.) 529.887
Poultry Processor	Poultry Dresser (agric.; slaugh. & meat pack.) 525.887
Egg Candler	Egg Candler (any ind.) 529.867
Meat Plant Worker	Laborer (slaugh. & meat pack.) 529.887
Meat and Poultry Products Salesman	Salesman, Foodstuffs (whole. tr.) 292.358
Livestock Buyer	Buyer, Livestock (slaugh. & meat pack.) 162.158
Poultry Buyer	Buyer, Poultry (whole. tr.) 162.158

AGRICULTURAL PRODUCTS--Continued

Occupational Titles Found in Many of the State Studies	Dictionary of Occupational Titles Third Edition, 1965
Dairy Products	
Dairy Products Processing Plant Manager	Production Superintendent (any ind.) 183.118
Dairy Products Plant Production Manager	General Foreman (any ind.) I 183.168
Dairy Products Sales Manager	Manager, Sales (any ind.) 163.118
Dairy Store Manager	Manager, Store (ret. tr.) I 185.168
Dairy Products Plant Fieldman	Field Contact Man (dairy prod.) 162.158
Dairy Products Laboratory Technician	Dairy Technologist (profess. & kin.) 040.181
Dairy Products Quality Control Technician	Dairy Tester (agric.) 469.381
Dairy Products Plant Office Manager	Manager, Office (any ind.) 169.168
Dairy Products Plant Bookkeeper	Bookkeeper (clerical) I 210.388
Dairy Products Plant Processing Supervisor	General Foreman (any ind.) 183.168
Dairy Products Plant Processor	Dairy Processing Equipment Operator (dairy prod.) 529.782
Dairy Products Plant Worker	Dairy Helper (dairy prod.) 529.886
Dairy Products Salesman	Salesman, Foodstuffs (whole. tr.) 262.358
Dairy Products Driver Salesman	Salesman, Driver (any ind.) 292.358
Dairy Products Plant Mechanic	Maintenance Man (any ind.) 899-381
Dairy Products Plant Routeman	Milk Driver (dairy) 905.883

AGRICULTURAL PRODUCTS--Continued

Occupational Titles Found in Many of the State Studies	Dictionary of Occupational Titles Third Edition, 1965
Fruit, Vegetables	
Fruit and Vegetable Market Manager	Wholesaler (whole. Tr.) 185.168
Fruit and Vegetable Processing Plant Manager	Manager, Food Processing Plant (can. & preser.) 185.168
Fruit and Vegetable Sales Manager	Manager, Sales (any ind.) 163.118
Fruit and Vegetable Product Manager	Superintendent (agric.; can. & preser.) 180.168
Fruit and Vegetable Field Man	Field Man (any ind.) 180.118
Fruit and Vegetable Office Manager	Manager, Office (any ind.) 169.168
Fruit and Vegetable Salesman	Salesman, Foodstuffs (whole. tr.) 262.358
Fruit and Vegetable Processing Plant Foreman	Superintendent (agric.; can. & preser.) 180.168
Fruit and Vegetable Processing Worker	Production Helper (food prep., 529.886
Fruit and Vegetable Market Worker	Classified by specific duty
Fruit and Vegetable Buyer	Buyer, Agricultural Produce (whole. tr.) 162.158
Fruit and Vegetable Inspector or Grader	Grader Man (agric.) 521.885

AGRICULTURAL PRODUCTS--Continued

Occupational Titles Found in Many of the State Studies	Dictionary of Occupational Titles Third Edition, 1965
Cereal Grains	
Grain Elevator Manager	Superintendent, Grain Elevator (grain & feed mill.) 529.138
Grain Elevator Sales Manager	Manager, Sales (any ind.) 163.118
Grain Buyer	Buyer, Grain (whole. tr.) I 162.168
Seed Analyst	Seed Analyst (profess. & kin.) 040.381
Grain Elevator Office Manager	Manager, Office (any ind.) 169.168
Grain Salesman	Salesman, Grain & Feed Products (whole. tr.) 262.358
Grain Elevator Processing Supervisor	Miller, Foreman (grain & feed mill.) 521.130
Grain Elevator Man	Grain Elevator Man (grain & feed mill.) 921.883
Grain Elevator Mill Operator	Miller, Foreman (grain & feed mill.) 521.138
Grain Elevator Processing Worker	Grinder Operator (grain & feed mill.) 521.782
Grain Dryer and Cleaner	Grain - Dryer Operator (grain & feed mill.) 523.885
Ginner	Ginner (agric.) 461.885
Grain Elevator & Mill Maintenance Man	Millwright (any ind.) 638.281

Occupational Titles in the Area of
AGRICULTURAL RESOURCES

Occupational Titles Found in Many of the State Studies	Dictionary of Occupational Titles Third Edition, 1965
Recreation Farm Manager	Manager, Recreation Establishment (amuse. & rec.) 187.168
Dude Ranch Manager	Manager, Lodging Facilities (hotel & res.) 320.127
Soil Conservationist	Soil Conservationist (profess. & kin.) 040.181
Soil Scientist	Soil Scientist (profess. & kin.) 040.181
Soil Conservation Technician	Soil Conservationist (profess. & kin.) 040.181
Soil Conservation Aid	Soil Conservationist Aid (profess. & kin.) 040.181
Park Naturalist	Park Naturalist (gov. ser.) 099.228
Zoo Keeper	Animal Keeper, Head (amuse. & rec.) 356.138
Aviary Manager	Animal Keeper, Head (amuse. & rec.) 356.138
Gamekeeper	Gamekeeper (hunt. & trap.) 481.181
Huntsman	Huntsman (amuse. & rec.) 187.168
Wildlife Conservation Officer	Fish and Game Warden (gov. ser.) 379.168
Government Trapper	Predatory Animal Hunter (hunt. & trap.) 451.781
Park Worker	Park Worker (gov. ser.) 407.887
Game Farm Worker	Game Farm Helper (hunt. & trap.) 419.884
Animal Keeper	Animal Keeper (amuse. & rec.) 356.874

Occupational Titles in the Area of FORESTRY

Occupational Titles Found in Many of the State Studies	Dictionary of Occupational Titles Third Edition, 1965
Forestry Manager	Forester (profess. & kin.) 040.081
Forest Warden	Chief Warden (gov. ser.) 188.168
Forest Cruiser	Chief Cruiser (forestry) 449.168
Field Man	Field Man (forestry) 162.158
Forester Aid	Forester Aid (gov. ser.) 441.384
Buyer	Logging Contractor (logging) 183.168
Foreman, Saw Mill	Foreman (wood working) 669.137
Log Grader	Log Grader (logging) 941.387
Log Scaler	Log Scaler (logging) 941.488
Logging Operations Inspector	Logging Operations Inspector (forestry) 449.287
Timber Marker	Timber Marker (logging) 940.348
Bough Cutter	Bough Cutter (forestry) 442.887
Christmas Tree Cutter	Christmas Tree Cutter (agric.) 406.887
Greens Picker	Greens Picker (forestry) 442.887
Logger	Logger, All around (logging) 940.884
Saw Mill equipment operator	Gang Sawyer (sawmill) 667.782
Timber Cutter	Faller (logging) 940.884
Seed Cone Picker	Seed Cone Picker (forestry) 449.887
Sprayer	Sprayer (forestry) 441.887
Tree climber	Tree climber (forestry) 449.884
Gum Gatherer	Sap Collector (agric) 442.887

Occupational Titles in the Area of ORNAMENTAL HORTICULTURE

Occupational Titles Found in Many of the State Studies	Dictionary of Occupational Titles Third Edition, 1965
Nursery Manager Greenhouse Manager	Nurseryman (agric.) 406.168
Garden Center Manager	Manager, Store (ret. tr.) I 185.168
Florist	Manager, Retail Floral (ret. tr.) 185.168
Park Superintendent	Park Foreman (gov. ser.(407.134
Tree Service Manager	Manager, Service Department (whole. tr.) 187.168
Landscape Architect Highway Landscape Architect	Landscape Architect (profess. & kin.) 019.081
Golf Course Superintendent	Superintendent, Greens (amuse. & rec.) 407.138
Landscape Consultant Landscape Aid	Landscape Gardener (agric.) 407.181
Floral Designer	Floral Designer (ret. tr.) 142.081
Ornamental Horticulture Bookkeeper	Bookkeeper (clerical) 210.388
Nursery Salesman	Salesman, Horticulture and Nursery Products (whole. tr.) 260.---
Garden Center Salesman	Sales Person, Flowers (ret. tr.) 260.458
Nursery Grower Greenhouse Grower	Nurseryman (agric.) 406.168
Nursery Shipping Clerk	Shipping Clerk (clerical) II 222.578

ORNAMENTAL HORTICULTURE--Continued

Occupational Titles Found in Many of the State Studies	Dictionary of Occupational Titles Third Edition, 1965
Nursery Worker Greenhouse Worker Garden Center Worker	Nursery Worker (agric.) 406.887
Garden Center Mechanic	Maintenance Mechanic (any ind.) II 638.281
Greenskeeper	Greenskeeper (any ind.) 407.137
Groundskeeper	Groundskeeper (any ind.) 407.884
Tree Surgeon	Tree Surgeon (agric.) 407.181
Tree Pruner Tree Pruner Helper	Tree Pruner (agric.) 404.884 Groundman (agric. & hort. ser.) 951.884
Tree Sprayer	Sprayer (agric.) 424.883

Occupational Titles in the Area of
OTHER AGRICULTURE

Occupational Titles Found in Many of the State Studies	Dictionary of Occupational Titles Third Edition, 1965
Business Services	
Agricultural Consultant, Bank	Credit Reporter (bus. ser.) 249.368
Farm Appraiser	Appraiser, Real Estate (real estate) 191.287
Farm Loan Officer	Loan Officer (banking) 186.288
Farm Placement Officer	Personnel Recruiter (profess. & kin.) 166.268
Farm Organization Fieldman	Membership Solicitor (bus. ser.) 293.358
Breed Association Fieldman	Representative (bus. ser.) 293.358
Education	
Vocational Agriculture Instructor	Teacher, Secondary School (educ.) 091.228
County Agent	County - Agricultural Agent (gov. ser.) 096.128
Agriculture Professor	Faculty Member, College or University (educ.) 090.228
Vocational-Technical Instructor	Teacher, Technical Education (educ.) 090.228
Agricultural Journalist	Reporter (print. & pub.) 132.268
Market News Analyst	News Analyst, Broadcast (radio & t.v. broad.) 131.068
Inspection, Regulation Other Government	
ASCS Compliance Supervisor	Investigator (gov. ser.) 168.168
ASCS Field Reporter	Farm Checker (gov. ser.) 249.368
Agriculture Commodity Grader	Agriculture Commodity Grader (gov. ser.) 168.287

OTHER AGRICULTURE--Continued

Agricultural Produce Inspector	Food and Drug Inspector (gov. ser.) 168.287
Agricultural Chemicals Inspector	Quality Assurance Representative (gov. ser.) 168.287
Brand Inspector	Brand Inspector (gov. ser.) 413.687
Apiary Inspector	Apiary Inspector (gov.ser.) 168.287
Livestock Inspector	Veterinary Livestock Inspector (gov. ser.) 073.181

THE STANDARD INDUSTRIAL CLASSIFICATION

A classification system which was designed for a different purpose than the Dictionary of Occupational Titles is the Standard Industrial Classification system (SIC). This system was prepared by the Technical Committee on Standard Industrial Classification and was published in 1957 by the Bureau of the Budget, Executive Office of the President.

The Standard Industrial Classification was developed for use in the classification of establishments by type of economic activity in which engaged, and for the purpose of facilitating the collecting, tabulation, presentation, and analysis of data relating to the establishments.

The classification is arranged in major groups (identified by three digit numbers) and industry number (a four digit number).

The SIC arrangement which has been developed for this publication may be used as a reference for classification. It is compatible with the on-going systems of classifications now in popular use by leaders in guidance and by personnel in business and industry.

The arrangement developed for this publication is according to the seven major instructional areas of agricultural subject matter. Faculty and facilities requirements are specific to each area. In addition, there are other occupations that are not as readily classified by subject matter. They are added according to the instructional area they serve or as other.

The inclusion and arrangement of the SIC for this publication is primarily for information and convenience of teachers and guidance counselors. It provides, in effect, an "umbrella" activity classification under which all instructional areas and occupational titles may

be grouped. If educators are requested to program or report under an activity or establishment classification system, this information may be helpful. If reporting should be required for any purpose under SIC, this arrangement would be of direct assistance.

In connection with the currently increasing use of data processing it is entirely possible that educational information may be gathered on the basis of codes used in both or either of the DOT and SIC classifications. If this develops, the SIC as arranged in this publication may be useful.

INSTRUCTIONAL AREAS FOR VOCATIONAL AND TECHNICAL EDUCATION IN AGRICULTURE WITH GROUP AND INDUSTRY NUMBERS FROM THE STANDARD INDUSTRIAL CLASSIFICATION MANUAL

1. AGRICULTURE PRODUCTION

a. Commercial Farms

Group	Industry	
011		FIELD CROP FARMS
	0112	Cotton farms
	0113	Cash grain farms
	0119	Field crop farms (NEC)*
012		FRUIT, TREE NUT, AND VEGETABLE FARMS
	0122	Fruit and tree nut farms
	0123	Vegetable farms
013		LIVESTOCK FARMS
	0132	Dairy farms
	0133	Poultry farms (pheasants, quail, etc.)
	0139	Livestock farms (NEC)
014		GENERAL FARMS
	0142	General farms -- primarily crops
	0143	General farms -- primarily livestock
019		MISCELLANEOUS COMMERCIAL FARMS
	0192	Horticultural specialties (mushrooms, etc.)
	0193	Animal spcialties (fur farms, worms, etc.)
	0199	Commerical farms (NEC)

b. Non-commercial Farms

021		NON-COMMERCIAL FARMS
	0212	Part-time farms
	0213	Residential farms
	0214	Institutional farms

c. Production Facilities

071		AGRICULTURAL SERVICES, EXCEPT ANIMAL HUSBANDRY AND HORTICULTURAL SERVICES
	0714	Corn shelling, hay baling, and threshing
	0715	Contract sorting, grading, packing, shipping fruits and vegetables for grower
	0719	Agricultural services (NEC)
072		ANIMAL HUSBANDRY SERVICES
	0722	Offices of veterinarians and animal hospitals
	0723	Poultry hatcheries
	0729	Animal husbandry services (NEC)
179		MISCELLANEOUS SPECIAL TRADE CONTRACTORS
	1799	Special trade contractors (NEC)
497		IRRIGATION SYSTEMS
	4971	Irrigation system operation

*NEC not elsewhere classified

2. AGRICULTURAL MACHINERY

Group	Industry	
352		FARM MACHINERY AND EQUIPMENT
	3522	Farm machinery and equipment (manufacturing)
508		MACHINERY, EQUIPMENT, AND SUPPLIES
	5083	Farm machinery (wholesale)
525		HARDWARE AND FARM EQUIPMENT
	5252	Farm equipment dealers (retail)

3. AGRICULTURAL SUPPLIES

a. Feed, Seed, and Fertilizer

204		GRAIN MILL PRODUCTS
	2042	Prepared feeds for animals and fowls
209		MISCELLANEOUS FOOD PREPARATION & KINDRED PRODUCTS
	2091	Cottonseed oil mills
	2092	Soybean oil mills
596		FARM AND GARDEN SUPPLY STORES
	5962	Hay, grain and feed stores
	5969	Farm and garden supply stores (NEC)

b. Agricultural Chemicals

287		AGRICULTURAL CHEMICALS
	2871	Fertilizers (manufacturing)
	2872	Fertilizers (mixing only)
	2879	Agricultural chemicals (NEC)
502		DRUGS, CHEMICALS AND ALLIED PRODUCTS
	5029	Chemicals and allied products (NEC)

c. Equipment

525		HARDWARE AND FARM EQUIPMENT
	5251	Hardware stores
539		MISCELLANEOUS GENERAL MERCHANDISE STORES
	5399	General stores (includes farm supplies)

4. AGRICULTURE PRODUCTS

a. Meat Products

201		MEAT PRODUCTS
	2011	Meat packing plants
	2015	Poultry & small game dressing, packing, whole.

Group	Industry	
504		GROCERIES AND RELATED PRODUCTS (wholesale)
	5044	Poultry and poultry products
	5047	Meats and meat products
542		MEAT AND FISH (Sea Food) MARKETS (retail)
	5421	Meat and fish (sea food) markets
549		MISCELLANEOUS FOOD STORES (retail)
	5499	Egg and poultry dealers

b. Dairy Products

202		DAIRY PRODUCTS
	2021	Creamery butter
	2022	Natural cheese
	2023	Condensed and evaporated milk
	2024	Ice cream and frozen desserts
	2026	Fluid milk
504		GROCERIES AND RELATED PRODUCTS (wholesale)
	5043	Dairy products
545		DAIRY PRODUCTS STORES (retail)
	5451	Dairy products stores

c. Fruits and Vegetables

203		CANNING AND PRESERVING FRUITS & VEGETABLES
	2033	Canned fruits, vegetables, preserves, jams, jellies
	2034	Dehydrated and dried fruits and vegetables
	2035	Pickling fruits and vegetables
	2037	Frozen fruits and vegetables
504		GROCERIES AND RELATED PRODUCTS (wholesale)
	5048	Fresh fruits and vegetables
543		FRUIT STORES AND VEGETABLE MARKETS (retail)
	5431	Fruit stores and vegetable markets

d. Grain

204		GRAIN MILL PRODUCTS
	2041	Flour and other grain mill products
	2043	Cereal preparations
	2044	Rice milling
206		SUGAR
	2061	Cane sugar, except refining only
	2063	Beet sugar
504		GROCERIES AND RELATED PRODUCTS (wholesale)
	5049	Groceries and related products (NEC)

e. Marketing facilities

Group	Industry	
422		PUBLIC WAREHOUSING
	4221	Farm products warehousing and storage
	4223	Food lockers, with or without preparation facilities
473		STOCKYARDS
	4731	Stockyards
505		FARM PRODUCTS - RAW MATERIALS
	5051	Farm products - raw materials (livestock, wool, grain, cotton, leaf tobacco)
539		MISCELLANEOUS GENERAL MERCHANDISE STORES
	5399	General stores (includes farm supplies)

5. AGRICULTURAL RESOURCES

074		HUNTING AND TRAPPING AND GAME PROPAGATION
	0741	Hunting and trapping and game propagation
703		TRAILER PARKS AND CAMPS
	7032	Sporting and recreational camps
794		MISCELLANEOUS AMUSEMENTS AND RECREATION SERVICES
	7942	Public golf courses
	7947	Golf clubs and country clubs
	7948	Racing stables
	7949	Riding academies and stables
098		FISHERY SERVICES
	0989	Fishery services

6. FORESTRY

081		TIMBER TRACTS
	0811	Timber tracts, including Christmas tree farms
082		FOREST NURSERIES, TREE SEED GATHERING, AND EXTRACTING
	0822	Forest nurseries
	0823	Tree seed gathering and extracting
084		GATHERING OF GUMS AND BARKS
	0842	Gathering of gums and barks
085		FORESTRY SERVICES
	0851	Forestry services

7. ORNAMENTAL HORTICULTURE

a. Nurseries, Greenhouses

019		MISCELLANEOUS COMMERCIAL FARMS
	0192	Horticultural specialties
596		FARM AND GARDEN SUPPLY STORES
	5969	Farm and garden supply stores (NEC)

b. Landscaping, Turf

Group	Industry	
073		HORTICULTURAL SERVICES
	0731	Horticultural services

c. Floriculture

599		RETAIL STORES (NEC)
	5992	Florists

8. OTHER AGRICULTURE

a. Business Services

613		AGRICULTURAL CREDIT INSTITUTIONS
	6131	Agricultural credit institutions
739		BUSINESS SERVICES (NEC)
	7391	Research, development and testing laboratories
	7392	Business and management consulting services
	7399	Business services (NEC)
861		BUSINESS ASSOCIATIONS
	8611	Business associations
862		PROFESSIONAL MEMBERSHIP ORGANIZATIONS
	8621	Professional membership organizations

b. Education

821		ELEMENTARY AND SECONDARY SCHOOLS
	8211	Elementary and secondary schools
822		UNIVERSITIES AND JUNIOR COLLEGES
	8221	Universities
	8222	Colleges
824		CORRESPONDENCE AND VOCATIONAL SCHOOLS
	8241	Correspondence schools
	8242	Vocational schools
899		SERVICES (NEC)
	8999	Services, not elsewhere classified, such as agricultural communications, including writing, editing, broadcasting

c. Inspection, Regulation, Other Government

9--		GOVERNMENT
	91--	Federal Government
	92--	State Government
	93--	Local Government
	94--	International Government

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V

RESOURCES

Included in this chapter are resources to aid in guidance, counseling, and placement of students enrolled in preparatory or supplementary education in off-farm agricultural occupations. A selected bibliography lists the best printed resources concerning occupational guidance in agriculture. Tests which can be utilized in occupational guidance in agriculture are also listed which should assist the teacher in working with individual students.

The earliest needs of students, before reaching senior high school, are for educational guidance. The selected bibliography and test materials should be particularly helpful to the vocational agriculture teacher in this function.

Placement is here defined as assistance to persons in locating and obtaining satisfactory employment following completion of an educational program. It is a function that should be accepted as a formal responsibility of all secondary schools, and surely also of area vocational-technical schools and community colleges. Former students should be considered as alumni and welcomed to return for help at any time later in life.

There is limitless opportunity for pilot programs to test new ways to upgrade instructors in their effectiveness in helping students to locate fields of specialization most suited to the students' characteristics. Some of the published standardized instruments listed on the following pages are worth being used in almost all new educational programs for off-farm agricultural occupations.

A dialogue between a student and a teacher has been included in Appendix B to give the reader some idea as to the manner in which the material in this publication can be utilized.

A Selected Bibliography on Occupational Guidance in Agriculture

1. Bureau of Employment Security, Dictionary of Occupational Titles, Volumes I and II, Gov't. Pr. Off., Third Edition, 1965.

2. Bureau of Employment Security, Guide to Local Occupational Information, U. S. Dept. of Labor, Manpower Administration, Washington, D. C. 20210, 1962.

3. Bureau of Employment Security, Job Guide for Young Workers, 78 pp. Gov't. Pr. Off., 1963. (New edition in process will include more off-farm agricultural occupations.)

4. Bureau of Labor Standards (Bul. 271) Handbook for Young Workers. 29 pp. Gov't. Pr. Off., 1965.

5. Byram, Harold M. and Albracht, James J. Publications on Occupational Information in Agriculture, College of Education, Michigan State University, East Lansing, Michigan, 1964.

6. Byram, Harold M. Guidance in Agricultural Education, Danville, Illinois, The Interstate Printers & Publishers, Second Edition, 1966.

7. Chronicle Occupational Briefs, 1965-66. Volumes 1, 2, 3. (Set of 306 briefs including 25 in agricultural occupations.) Chronicle Guidance Publications, Inc., Moravia, New York.

8. Department of Agriculture, Profiles, Careers in the USDA, Gov't. Pr. Off., 1964.

9. Hoover, Norman K. Handbook of Agricultural Occupations, Danville, Illinois, The Interstate Printers & Publishers, 1963.

10. Hutchison, Chester S. Your Future in Agriculture, New York, N. Y, Richards Rosen Press, Inc., 1965.

11. Occupational Briefs. Science Research Associates, Inc., 259 East Erie Street, Chicago, Illinois 60611, 1965.

12. Office of Statistical Standards, Standard Industrial Classification Manual, Gov't. Pr. Off., 1957. Supplement, 1963.

13. Phipps, L. J. Handbook on Agricultural Education in Public Schools. (Chapters 31 and 32.) Danville, Illinois, The Interstate Printers & Publishers, 1965.

14. Stone, Archie A. Careers in Agribusiness and Industry. Danville, Illinois, The Interstate Printers & Publishers, 1965.

15. There's a New Challenge in Agriculture, 21 pp. Resident Instruction Section, Division of Agriculture, American Association of Land-Grant Colleges and State Universities, 1962.

16. U. S. Department of Labor. Occupational Outlook Handbook, Bulletin No. 1375. Gov't. Pr. Off., 1963-64.

Tests to Use in Occupational Guidance in Agriculture

Bureau of Employment Security, General Aptitude Test Battery. Contact state employment service offices to have the tests administered, scored, and interpreted. There is no charge to schools, workers, or employers.

Bureau of Employment Security, Interest Check List. Contact a state employment service office. A counselor will administer the instrument and discuss the results with the individual.

California Test Bureau. Occupational Interest Inventory and related instruments in a series. Intended for use in a counseling sequence.

Clark, Kenneth E. Minnesota Vocational Interest Inventory. New York, The Psychological Corporation, 1965. Specially designed to measure interests in non-professional occupations. Useful with vocational and technical school students and with unemployed adults.

Kuder, G. Frederick. Kuder Preference Record Occupational Form D and Kuder E General Interest Survey. Chicago, Science Research Associates, 1957, 1963. Keys have been prepared for Form D for several agricultural occupations.

Oliver, James E. Educational Interest Inventory. Dearborn, Michigan, Educational Interest Testing Associates, 1962. Self-administering. Agriculture is one of nineteen subject areas of interest for men.

Sextant Series for Exploring Your Future in Agriculture. Milwaukee, Wisconsin, American Liberty Press, 1962. A 90-page combination self-assessment device and set of occupational briefs in agriculture. The Wilkinson method of personal profiling also has been used in eleven other subject areas for high school students.

Walker, R. W., Stevens, G. Z., Hoover, N. K. Vocational Agriculture Interest Inventory. Danville, Illinois, The Interstate Printers & Publishers, 1965. Intended for use with eighth grade boys. High scores indicate interest and probable success in high school courses in agriculture.

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APPENDICES

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APPENDIX A

Occupational Titles in the Economic Area of PRODUCTION AGRICULTURE

Dictionary of Occupational Titles Third Edition, 1965	
Animal Breeder (agric.)	419.181
Auctioneer (ret. tr; whole. tr.)	294.258
Beekeeper (agric.)	419.181
Berry Grower (agric.)	404.181
Broker and Market Operator (finan.;whole. tr.)	162.158
Buyer, Wool (whole. tr.)	162.158
Camp Tender (agric.)	413.138
Cattle Rancher (agric.)	413.181
Commission Man, Agricultural Produce (whole.tr.)	261.158
Cotton Grower (agric.)	402.181
Crab Farmer (fish.)	436.884
Dairy Tester (agric.)	469.381
Detasseling, Crew Supv. (agric.)	469.137
Farmer, Cash Grain (agric.)	401.181
Farmer, Contract (agric.)	409.883
Farmer, Dairy (agric.)	411.181
Farm Equipment Operator (agric.)	409.883
Farm Foreman (agric.)	429.131
Farm Hand I (agric.)	401.884
Farm Hand II (agric.)	401.887
Farmer, Tenant (agric.)	408.181
Fence Erector (const.)	869.884

Dictionary of Occupational Titles Third Edition, 1965	
Field Hauler (agric.)	409.883
Fish Farmer (agric.)	436.181
Flower Grower (agric.)	406.181
Frog Grower (fish.)	436.181
Fruit Harvester Operator (agric.)	404.883
Fur Farmer (agric.)	419.181
Game Farmer (agric.)	419.181
General Manager, Farm (agric.; whole, tr.)	180.168
Grape Grower (agric.)	404.181
Harvest Contractor (agric.)	469.158
Hay Grower (agric.)	405.181
Horseshoer (any ind.)	356.381
Irrigator, Head (agric.)	422.137
Manager, Farm (agric.)	409.168
Manager, Irrigation District (waterworks)	184.118
Migrant Leader (agric.)	180.168
Milking Machine Operator (agric.)	411.181
Mushroom Grower (agric.)	406.181
Orchardist (agric.)	404.181
Peanut Grower (agric.)	405.181
Peanut Picker Operator (agric.)	405.885
Poultry Breeder (agric.)	412.181

Dictionary of Occupational Titles Third Edition, 1965	
Poultryman Eggs (agric.)	412.181
Seed Grower (agric.)	405.181
Sharecropper (agric.)	409.884
Sheep Herder (agric.)	413.887
Sheep Rancher (agric.)	413.181
Sheep Shearer (agric.)	469.884
Shell Fish Grower (fish.)	436.181
Tobacco Grower (agric.)	405.181
Vegetable Grower (agric.)	404.181
Worm Grower (agric.)	419.181

APPENDIX B

A Dialogue of a Teacher-Student Interview Developed to Indicate How the Booklet "Occupational Guidance For Off-Farm Agriculture" Can Be Used in Guidance for Off-Farm Agricultural Occupations.

Interviewer - Hi, Bill.

Student - Hello, Mr. Jones.

Interviewer - Have a seat, Bill.

Student - Thank you. Yesterday in class you talked to us about occupations that require a knowledge of agriculture. I'm not sure what I want to do when I finish high school, but I think I would be interested in some kind of agricultural work. My parents want me to go to college, but I'm not sure I want to go.

Interviewer - Are you interested in working with your father on your farm?

Student - No. Our farm is not large enough to support two families, and I don't have enough money to become established in farming for myself.

Interviewer - Uh huh. You are interested then in working somewhere in agriculture. You may consider college, but you are unsure at this time.

Student - That's right.

Interviewer - As we discussed in class, there are many off-farm agricultural occupations in which a knowledge of agriculture is required. Before we explore these occupations further, let's look at your permanent

record folder to see what we can learn about your achievements, aptitudes, and interests.

Student - I remember taking the tests and would like to know how I scored.

Interviewer - The California Achievement Test that you took last year indicates that you have above average ability in math and science, average ability in social studies and reading, and a little less than average ability in English. How are your grades in the courses you are taking this year?

Student - Well, I'm not doing too badly this year. I have a B in Algebra II, a C+ in history, a C- in English, a B in biology, and as you know, I'm making A's in agriculture.

Interviewer - Your present grades appear to be consistent with your academic ability. You may try to improve English since it is important for any occupations in which you must be able to communicate with people. A person from the Bureau of Employment Security will be in our school next week to administer the General Aptitude Test Battery, called the GAT-B. Let me suggest that you sign up at the guidance office to take it.

Student - I will do that. I hope you will be present when they come back to discuss my cores. And, as you mentioned, I should work harder on English. What information do you have about my interest scores?

Interviewer - We have the Vocational Agriculture Interest Inventory on which you scored a 60. This means that you have a high interest in agriculture. This includes farming and off-farm agriculture.

Student - I like agriculture very much.

Interviewer - On the new Kuder Preference Record, Form E, you have high scores on the outdoor, computational, and mechanical scales. You scored average on scientific, clerical, and social service and you scored low on persuasive, artistic and literary.

Student - Exactly what do these scores mean?

Interviewer - They tell us that you have interest in working outdoors and in the area of mechanics. The high score on computational indicates that you have a preference for working with numbers.

Student - I see. What off-farm agricultural jobs are available that would fit my interests?

Interviewer - Let's find out. We have a new booklet on "Guidance for Off-farm Agriculture." Let's look at it and find out what is available. As you can see, the booklet lists seven areas of off-farm agricultural occupations. They are: agricultural mechanics, agricultural supplies, agricultural products, agricultural resources, forestry, ornamental horticulture, and other, which includes business services, education and research, inspection, regulation, and other government services.

Interviewer - Have you ever visited any off-farm agricultural businesses?

Student - Yes, I have looked around the implement dealer's shop when I helped my father take tractors and other equipment to be repaired.

Interviewer - Do you think you might be interested in the area of agricultural mechanics?

Student - I think so. I'm not sure, but I enjoy our agricultural mechanics classes and I like to work with the farm equipment at home. I think I would like to work with agricultural machinery, but I need to know more about it.

Interviewer - Fine. Let's look closely at some occupational titles in the area of agricultural mechanics that are listed here in the booklet on off-farm agricultural occupations.

Student - Okay. (Student reads the page of job titles).

Interviewer - Are there any job titles that interest you?

Student - Yes, there are several. I think I would be interested in agricultural machinery set-up man, agricultural machinery parts man, or agricultural machinery mechanic. If I go to college, I might even be interested in becoming a manager of an agricultural machinery business.

Interviewer - Very good. You think you would be interested in these areas then. If you had to decide upon one, which one would you select?

Student - I don't know. Do you know more about what these men actually do on their jobs?

Interviewer - Yes, I do. Let's look at the job descriptions in the Dictionary of Occupational Titles and find out what employees in these occupations actually do. (Discuss each one from D.O.T.)

Student - I still haven't decided which job I would like best, but I do think I would like to work in the area of agricultural mechanics.

Interviewer - Would you be interested in learning at first hand the competencies workers in these jobs must have?

Student - Yes, I think I would like that very much.

Interviewer - As you know, we have a program of placement for supervised occupational experience for our ag mechanics students who are not going into farming. In this program we place boys in agricultural mechanics businesses where they work part-time and thus learn what is involved in the various jobs. Do you think you might be interested in participating in this program next year?

Student - Yes, I think I would enjoy doing that. It might help me decide which one of the jobs I would like to go into after graduation.

Interviewer - Fine. We will get together with you and your parents sometime in the near future and talk more about it.

Student - That's fine with me. I'll talk with dad and mother.

Interviewer - Before you leave perhaps we had better look into your schedule for next year. Do you think there is a possibility you may want to go to college when you graduate from high school?

Student - I'm not sure, but there is a possibility.

Interviewer - What courses will you need to schedule during the next two years if you would want to go to college?

Student - I suppose chemistry and physics and possibly more math.

Interviewer - Yes, take the best selection of these courses for you. Will you stop in to see me before you register for next year and I'll help you work out your schedule? Is that okay with you?

Student - Thank you. I will be glad to have you help me.

Interviewer - Fine. You think about what we have discussed today and we will talk about it again when you see me about your schedule for next year.